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Sales Management Portal

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ABSTRACT

In the collective success of any organization, the key people who would be acknowledged in the end, along with censuses of the organization either quarterly or half yearly, even yearly, are the salespersons. Inevitably, the organization should wait for a long time to interact with them and get the feedback periodically. This forms a gap between the expected growth and accomplishments to respective efforts. Hence with the help of technological advancements in the IT industry, we would enhance the organizational pipeline through an innovative web application. With the help of this advancement, we are looking forward to make the pipeline of any organization, a better place of interaction and improve the transparency of its workflow throughout the year. Apart from the incremental stock values, it proportionally builds a healthy motivation and bonds among the cross-functional teams.

Our project aims at designing the **Sales Management Portal** which acts as a proof of concept for a company's sales pipeline database. This portal majorly functions for the creation and maintenance of the sales database. The key features of this design would be:

- It allows its users, the sales staff, to easily add details of any new clients in the database at ease and maintain the log details of respective clients including contact information.
- It allows to announce the available opportunities, address the proposals and sooner or later projects also.
- Its inbuilt transparency in the portal design empowers top level management to supervise works and allows to track progresses
- It also tolerates a two-way communication from even the entry level sales trainee to any other hierarchical supervisor involved in the pipeline. This helps in avoiding any deviations observed in the project through proper and timely guidance.
- This portal possesses an interactive design which allows it to regulate the diverse resolutions, making it easy for user navigation through the portal on their own devices.

Modules:

Besides the vital features explained above, it has a skeletal structure equipped majorly with two modules namely Manager Module and the Employee module.

Manager Module:

In general manager, would control the level of authorizations each user should possess according to their level in the organization. As the name indicates, it usually contains the users working in the capacity of Managers. In this module, the manager can assign tasks to his subordinates at an ease and even track the progress of each task with the single click of a mouse. This makes his timeline shifted to other priorities flexibly. He can also easily communicate with individuals and a group through personal mails/ messages or accessing the announcements portal available.

Employee Module:

The end user who is responsible for all the front-end work is the employee. The Employee module is restricted with user specific authorizations set by the manager. The general purpose of this module is to add and save the new clients and prospects details with their general information, contact information and their proposals, opportunities and projects information. The sales management employees can also update the clients and prospects information and they can also search the client or a prospect through their names or by using the client or prospect filters to search the appropriate details.

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1 PROJECT DESCRIPTION

This project is aimed at developing an online **Sales Management Portal** for a company's sales pipeline database portal, which allows the management to monitor, keep track the progress and simultaneously interact with their sales team to better understand sales of GSU communications. The conceptual design of this project is to allow the staff to add new client details to the pipeline and keep their log of activities, proposals, contacts, opportunities and thus the whole project. This is a new application and is designed to easily navigate and adjust to diverse resolutions.

Modules:

Manager Module: Add/update employees, client's information in the portal, send messages to their team, generate progress reports and maintain project details.

Employee/Staff Module: Add new client information, keep their log of activities, contacts, perform search and filter options.

1.1 Competitive Information

There are so many template portals that are available in the market that are ready use. We consider all of them templates as our competitors. But our application is far more advanced when compared with other applications as we secured our application or websites, by providing various features like creating, adding, deleting clients and other functionalities etc. Sales management portal is a new application and is not an enhancement of any existing application or replacement of any application. Sales management portal is designed to easily navigate and adjust to diverse resolutions.

This application is more is designed to make users feel easy to use and it is designed responsively.

1.2 Relationship to Other Applications/Projects

GSU sales management portal has its own unique features and has additional functionalities when compared with other sales management templates that are readily available in the market. Our design architecture and flow is quite different with other template sales

portals. This portal is specifically designed to meet GSU communications requirements. Though, this project can be used as a template, it need some changes if any other client wants to use it.

1.3 Assumptions and Dependencies

This project allows the manager to monitor, track the progress and simultaneously interact with their sales team to better understand sales of company. The conceptual design of sales management portal allows the staff to add new client details to the pipeline and keep their log of activities, proposals, contacts, opportunities and thus the whole project.

- **Assumptions:** GSU sale management portal has its own functionality. It makes sales manager work easy by tracking and interacting with their employees. It gives better picture of the sales of GSU communications.
- **Dependencies:** GSU communications sales management portal doesn't have any dependencies. The functionality of this portal doesn't interfere with any other applications.

1.4 Future Enhancements

GSU Sales management portal is designed to perfectly meet the needs of GSU communications. It has all the features that GSU communications have asked for. It can be modified to meet future requirements. It can also be used as a template and can be used by other client by making necessary changes.

1.5 Definitions and Acronyms

ASP:	Active Server Pages
CLR:	Common Language Runtime
SQL:	Structured Query Language
Bootstrap:	Bootstrap is a java framework, used for responsive design of a website.
IIS:	Internet Information Services
LINQ:	Language Integrated Query
MVC:	Model View Controller
VS:	Visual Studio
SOA:	Service Oriented Application

WCF: Windows Communication Foundation

API: Application Program Interface

2 PROJECT TECHNICAL DESCRIPTION

- Manager messages are displayed in the announcement section in the order of dates.
- Alphabetical order of client names is listed on the left-hand side of the panel.
- Search button is provided on the left-side panel to search clients.
- Filter option has two button that is provided on the left-side panel to search short list clients.
- ADD button client is provided to add new client.

Software tool requirements:

Web Server	IIS (internet information services)
Databases	SQL server 2012
Technologies	C#.net, JavaScript jQuery, bootstrap
IDE	Visual Studio 2015
Tools	.net framework

2.1 Application Architecture

Flow Chart:

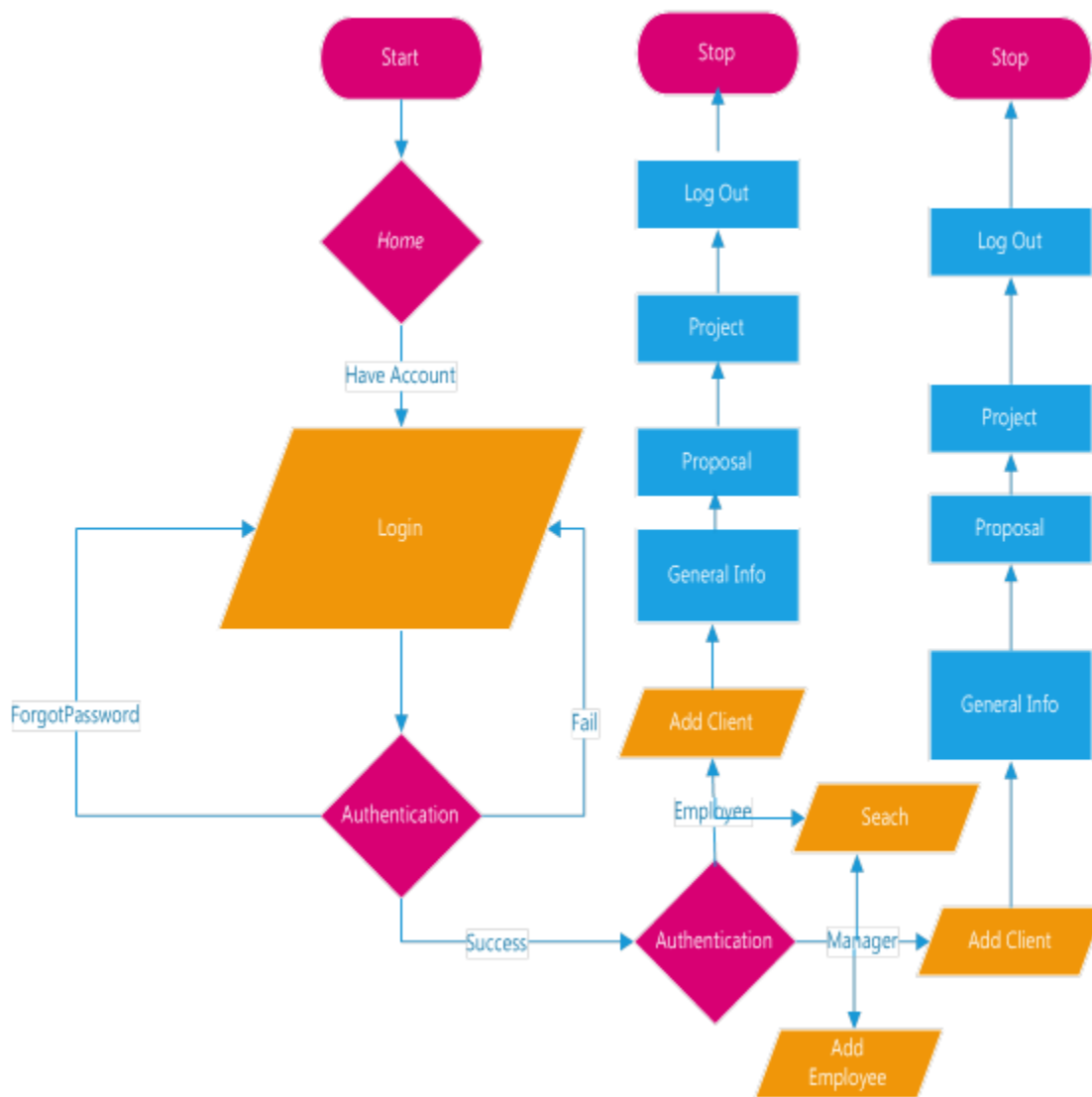


Figure: Flow Chart of Sales Management Portal

2.2 Application Information Flows:

This section of application information flows gives details on how the flow of project happens. The project that we developed for GSU communications is a web based project. This project is an internal project of GSU communications and has no interactions with any other applications. There are two modules mainly in the name of manager and employee. Manager have access to all the functionalities whereas employee has limited access to the functionalities. The home page of GSU sales management portal look like the following figure.

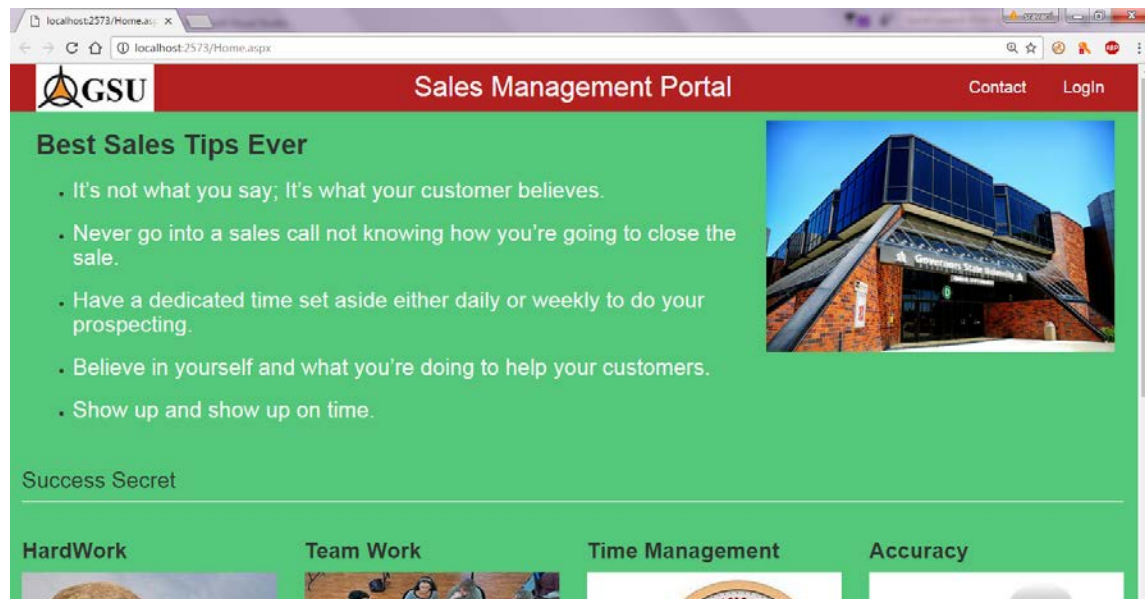


Figure: Home Page

The home page of GSU sale management portal has only two links on the top right of the pages that takes manager or employee to login and contact page. This page also contains few quotes that have nothing to do with the project. They are just to inspire employee.

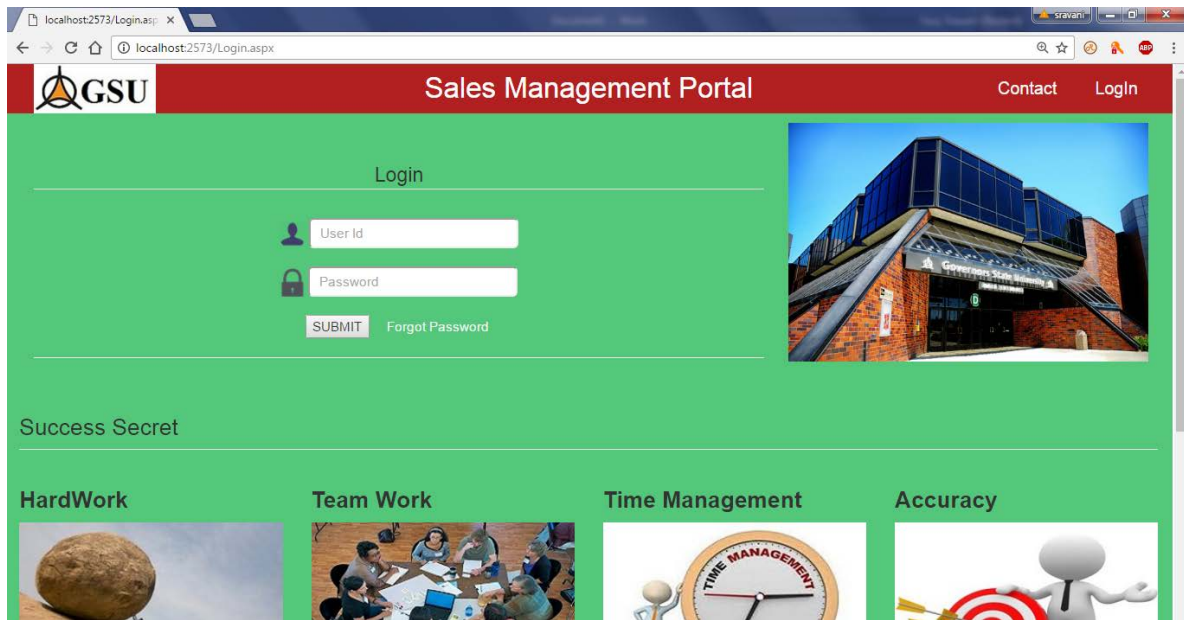


Figure: Login page for both Manager and Employee.

Both the manager and employee can login by giving their login credentials. Once logged in, both manager and employee see all the recent announcements that are made by manager. After login, manager and employee have different pages with different functionality.

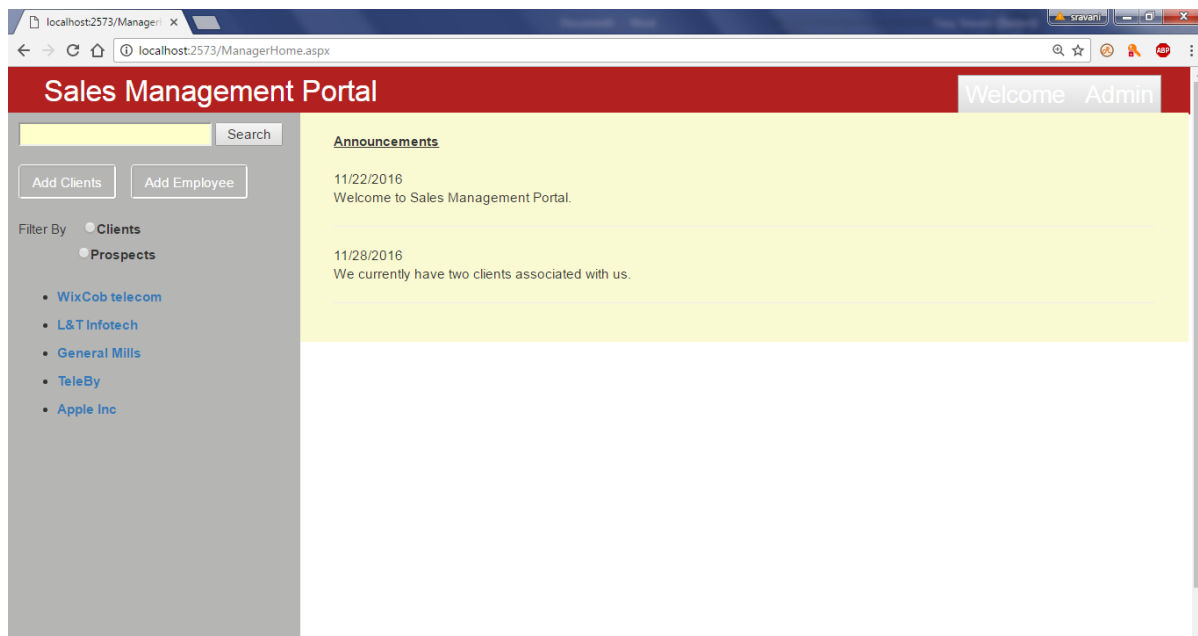


Figure: Manager Home Page.

The home page of manager look like the above figure. It has all the functionalities that GSU communications have asked for. On the left-hand side, it has, search field and search button to search for clients. It also has a filter which makes it easier to search client. It also displays the list of all clients in alphabetical order. The rest of page is announcement section that displays all the announcements that are made by manager and are displayed in the order of date.

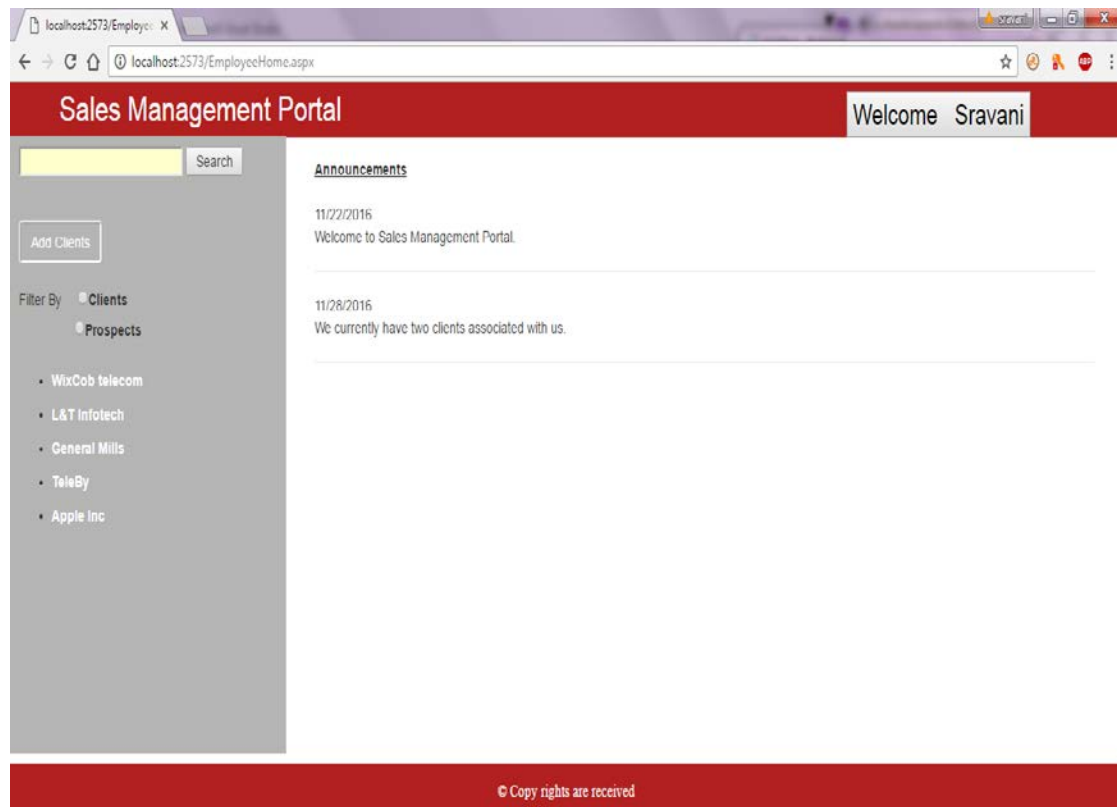


Figure: Employee Home Page.

The home page of employee is pretty much same as home page of manager. The search field, search button, filter, list of client and announcements are same like manager home page except that it doesn't have add employee button and make announcement button. All the announcements that are made can be viewed by employee by only logging in.

Employee profile can be created only by manager. Manager creates an employee profile by clicking “Add Employee” button. Manager need to enter all general details of employee like address and contact details. Once done with giving all details, manager can submit. An email will be sent employee with his user name and password. All the employee ID starts with 9001 and it gets incremented every time a new employee is added.

The screenshot displays a web browser window with the URL `localhost:2573/AddEmployee.aspx`. The page title is "Sales Management Portal" and the user is logged in as "Admin". The main content area is titled "Employee Details" and contains a form for adding a new employee. The form fields are as follows:

Field	Value/Options
Employee ID	9003
First Name	
Last Name	
Age	--select Age--
Gender	<input type="radio"/> Male <input type="radio"/> Female
Mobile Number	
Mail	
Address	
Department	--Select Department--
Designation	

A "Submit" button is located at the bottom right of the form. On the left side of the page, there is a sidebar with a search bar, buttons for "Add Clients" and "Add Employee", and a list of clients: WixCob telecom, L&T Infotech, General Mills, TeleBy, and Apple Inc.

Figure: Registering Employee Details

Employees are registered by the Manager using the “Add Employee” feature as shown above. The password will then be sent to the employee email address. Employee can use the password to login and change the password if they wish to.

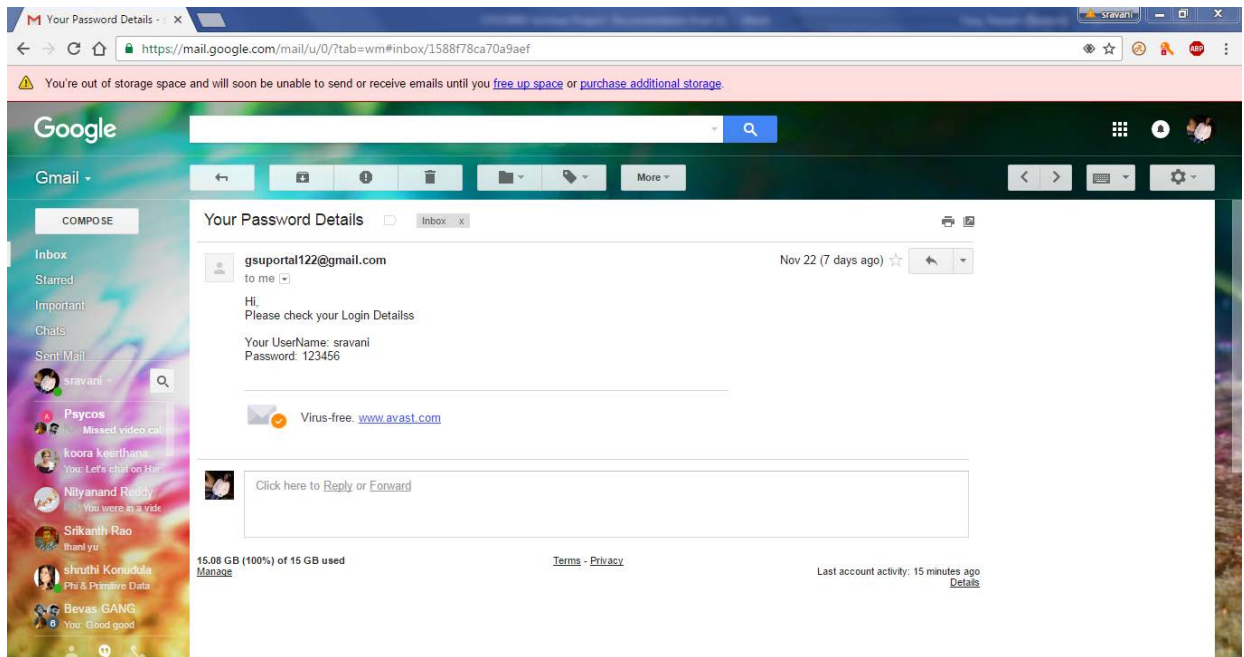


Figure: Password details send to mail id respectively.

The above figure display the username and password sent to email of specific employee.

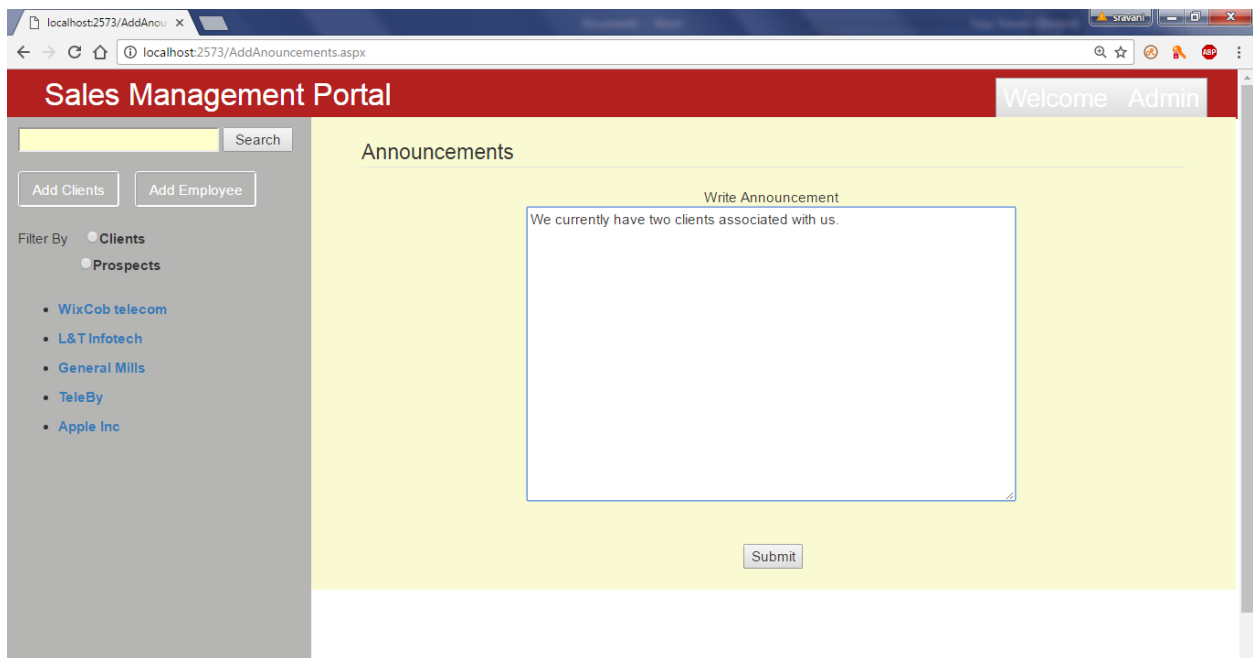


Figure: Manager Announcement page.

Any kind of announcement can be added by the Manager. It can be viewed on the Manager and Employee home page. Manager Home Page.

localhost:2573/ClientInfo X

localhost:2573/ClientInformation.aspx

Sales Management Portal Welcome Admin

GeneralInfo ConatctInfo Notes Opportunities Proposals

Search

Add Clients Add Employee

Filter By ☒ Clients ☐ Prospects

- WixCob telecom
- L&T Infotech
- General Mills
- TeleBy
- Apple Inc

General Information

Company Name Telephone

fax City

State

ZipCode Country

Division Address

Type Industry

Website Source

Description

Next Page

Figure: Client Registration Page.

Manager can add details of a client/prospect. When “Add Client” button is clicked, it displays as shown in the figure above. It asks for all the general information of the client and once done with these details and pressed next page, it takes to contact info page and then to notes, opportunities and proposals. When an Employee add a prospect, it should be approved by the Manager to start the project. Whereas, the prospects added by Manager is approved by default, has a project to start immediately. By default, all the clients added by employee are in pending state. Employee doesn’t have authorization to make the client’s project as accepted. Only manager can accept a proposal added by employee.

Sales Management Portal Welcome Sravani

Search

Back

L&T Infotech Details

Filter By: ☒ Clients ☐ Prospects

- WixCob telecom
- L&T Infotech
- General Mills
- TeleBy
- Apple Inc

Contact Information

First Name:

Last Name:

Role:

Work Phone:

Mobile No:

Fax:

Email:

Submit

Add ContactInfo

Add Notes

Add Opportunities

Add Proposals

Edit Proposals

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Figure: Employee Add Client Page.

The above figure displays the page to add client. It has almost same features as the manager add client page but different look and design. The below figure depicts proposal update page, where manager can update the status of the project. This is only when employee adds client. When manager adds client, it's status by default set as accepted.

Sales Management Portal Welcome Admin

Search

Add Clients Add Employee

Filter By: ☒ Clients ☐ Prospects

- WixCob telecom
- L&T Infotech
- General Mills
- TeleBy
- Apple Inc

Project

	ID	ProposalName	AddDate	BudgetDuration	Amount	ProposalStatus
Update	2003	Test	11/23/2016 12:00:00 AM	30000	8 months	Pending
Edit	2004	Communication system	11/23/2016 12:00:00 AM	50000	10 months	Pending

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Figure: Client proposal update page.

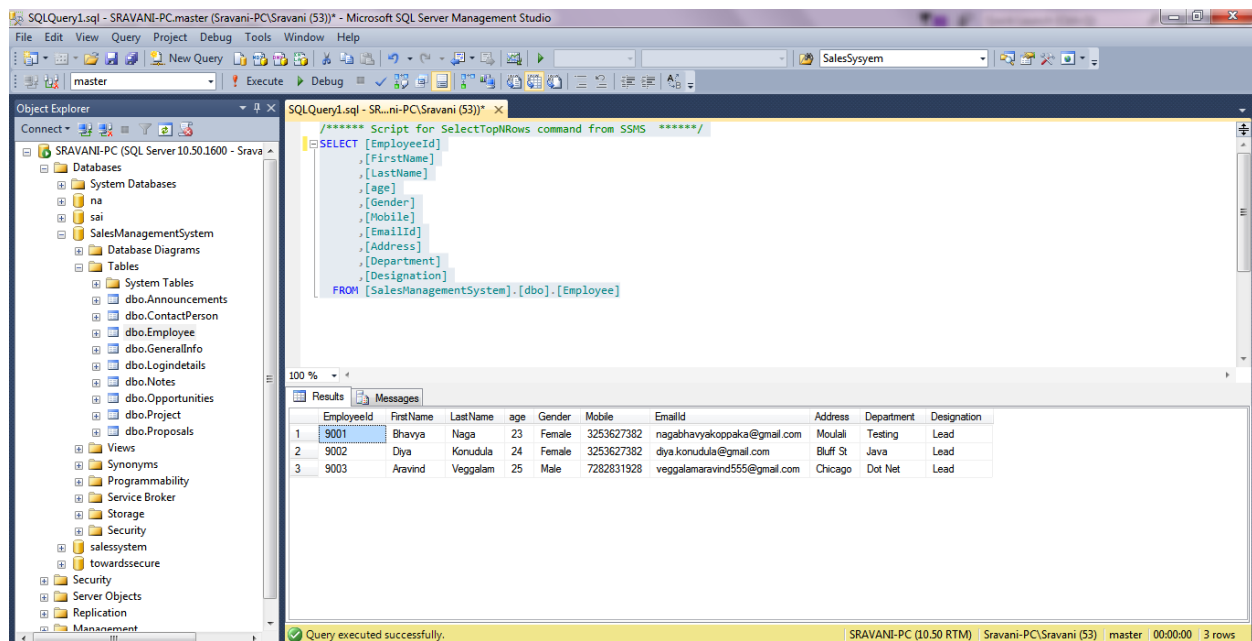


Figure: Database SQL 2012

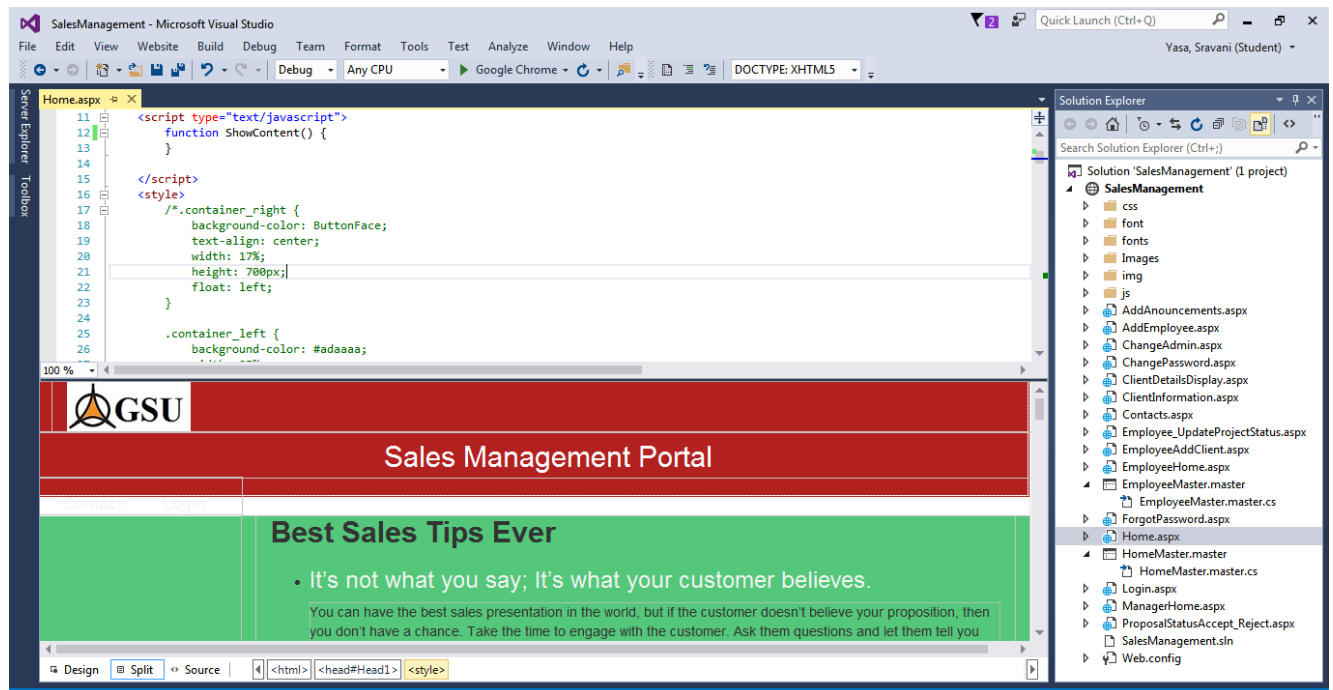


Figure: design using Visual studio 2015.

2.3 Interactions with other Projects (if Any)

Currently, there are no external interactions happening with other projects or applications. Future enhancements may require interaction with other application to meet the requirements. GSU sales management portal is an internal project of GSU communications, and all the functionalities can be achieved with interacting with other application.

2.4 Capabilities

- **Responsive User Interface:** Bootstrap is open source front end framework used in designing websites and its applications. It has HTML, CSS and JavaScript's which is mainly used for mobile and tablet applications. Bootstrap allows user to view the website by adjusting itself and not losing any content and there by perfectly fits their screen.
- **Well-Structured Flow:** In this project, all the modules are planned and structured in a well-defined flow so even the modules are changed, it won't affect the other functionalities and application of project. Once the login credentials are validated then only the login page allows manager/employee to enter next page else it just displays error message to user. Each field in this project are validated using Required field validator functions.
- **Password Encryption:** Password encryptions are done by using encryption functionalities in C# and access is given only to Manager(Admin) of this project.
- **Exception Handling:** Exception handling in this project is used to transfer control from one part of program to another. It has mainly keywords like try, catch and throw.
- **Effective use of Data:** Data in this project is organized by using SQL Server which supports all kinds of activities like adding, updating, deleting, retrieving from database.
- **Reports:** The data in database server is organized in well-structured manner so that it can be used to pull information, tracking of project status and information.
- **Break points:** We have used break points in our project code, to identify the errors in our Program. Advantage of using this is, it shows the exactly the line of code where it throws error.

2.5 Risk Assessment and Management

Following are the listed risks and the controlling measures to manage risk factors and recommendations to minimize and avoid the risks:

Risks	Recommendation
Traffic issues/Network down	Load balancing should be maintained. Increases routers
Server down	Backup server
Crash of application	Production team make sure that data is not lost.
System failure	Should have backup system which should be up and running when main system is failed.
Time Management	Each member in all teams should equally contribute to complete project successfully on time.
Hardware Failure	Centralized data like cloud services.
Lack of SME's (subject matter expert)	Should have backup SME's in team.

3 Project Requirements:

3.1 Identification of Requirements

<http://localhost:2573/> is the web link of this project which redirects to home page and two types of users can Login i.e., Manager and Employee can access the Sales Management portal, based on their roles and the functionalities in this project. Development of this Portal requires following requirements as specified below:

1. For GSU Sales Management Portal we have choose front end as C # Asp.net and database is SQL Server. We have three members in team so worked equally on each module.
2. Each module in this project has specific task and later divided into sub task.

3. GSU Sales Management Portal is achievable task as it supports all the features of the sales portal.
4. Results of this project are Manager functionalities like adding client and employee details and manager can update the project status. Employee functionalities like adding client details. He/she can update the opportunities and proposal of sales portal.
5. Manager can add announcement and which can be broadcasted to all the employees of the team.
6. The project is delivered on 12-01-2016, and all the requirements are met as scheduled.

Design of database:

<GSU-GS_FALL2016-3 General information-0001>

CompanyId int identity primary key, CompanyName varchar(50), TelephoneNumber int not null, Fax varchar(50), Address varchar(200), City varchar(50), ZipCode int not null, Contry varchar(20), Division varchar(20), Type varchar(50), Industry varchar(50), WebSite varchar(50), [Description] varchar(500), [Source] varchar(200)

<GSU-GS_FALL2016-3 Contact Information-0002>

ContactId int identity primary key, FirstName varchar(50), LastName varchar(50), Title varchar(50), OfficePhone varchar(20), Mobile int, Fax varchar(50), EmailId varchar(50), CompanyId int foreign key references GeneralInfo(CompanyId)

<GSU-GS_FALL2016-3 Opportunities-0003>

Id int primary key identity, OpportunityName varchar(50), AddBy varchar(50), DateAdded date, ChanceToClose varchar(50), Estimate_Budget numeric(8,2), Opportunity_Duration varchar(50), Opportunity_Type varchar(50), ContactName varchar(50), ContactNumber varchar(50), [Description] varchar(200), Notesaboutus varchar(200), CompanyId int foreign key references GeneralInfo(CompanyId)

<GSU-GS_FALL2016-3 Project-0004>

ProjectId int primary key identity, ProjectName varchar(100), ProjectManager varchar(50), DateAdded date, ProjectAmount numeric(18,2), TotalRevenue numeric(18,2), ProjectDuration varchar(50), ProjectStatus varchar(100), LunchDate date, ContactName varchar(50), telephone varchar(50), ProjectDescription varchar(500), ProjectNotes varchar(200), CompanyId int foreign key references GeneralInfo(CompanyId)

<GSU-GS_FALL2016-3 Proposals-0005>

ProposalId int identity primary key, AccountManager varchar(50), DateAdded date, ChanceToClose decimal(18,2), EstimatedBudget decimal(18,2), ProjectDuration varchar(50), ProposalAmount decimal(18,2), TotalRevenue decimal(18,2), ProposalStatus

<GSU-GS_FALL2016-3 Notes-0006>

NotesId int (Primary key), Description varchar(1000), Features varchar(1000), CompanyId int(Foreign Key)

<GSU-GS_FALL2016-3 Employee-0007>

EmployeeId varchar(50), FirstName varchar(100), LastName varchar(100), Age int, Gender varchar(50), Mobile varchar(50), EmailId varchar(50), Address varchar(500), Department varchar(50), Designation varchar(50)

<GSU-GS_FALL2016-3 Login page-0008>

UserId varchar(200), Username varchar(200), Password varchar(100), MailId varchar(500), Usertype varchar(100)

<GSU-GS_FALL2016-3 Announcement-0009>

Id int, AnnouncementDate varchar(100), AnnouncementData varchar(500)

3.2 Operations, Administration, Maintenance and Provisioning (OAM&P)

OAMP are the four activities, tools and standards involved in operating, administrating, managing, and maintaining this current system. Applicable to Network devices and hardware components of this project.

- **Operations:** This describes the day to day activities of this project like daily meeting with in the team, escalations in project, communications and updates in team through emails and meetings. Having check list, tickets procedures, on call details for project.
- **Administration:** In administration, it describes activities like common passwords, tools and system access. Timesheets, meetings, agenda and customer service support.
- **Maintenance:** This includes hardware and configuration changes in our project. Maintenance may be either scheduled or unscheduled. Maintenance of network devices and software like upgrading or updating them to different versions. Fixing bugs in project and involved in removal of administrative privileges as a security policy.
- **Provisioning:** Adding new equipment, new service, installing new hardware comes under provisioning of this project.

3.3 Security and Fraud Prevention

Security for this project provided by matching the user name and password of Manager and employee login pages respectively. All the details of user name and password are saved in database. It fetches information from database whenever user tries to login. Only valid user can login. When unauthorized user tries to login it redirects to error page. And when authorized user forgets his/her password or password expires then it sends the password to email id securely.

3.4 Release and Transition Plan

Time Management:

Project Start Date: 08/29/2016

- First seminar presentation: 09/19/2016

Details on abstract and Requirements are to be discussed

- Second seminar: 10/24/2016

Details of design and progress of project are to be discussed

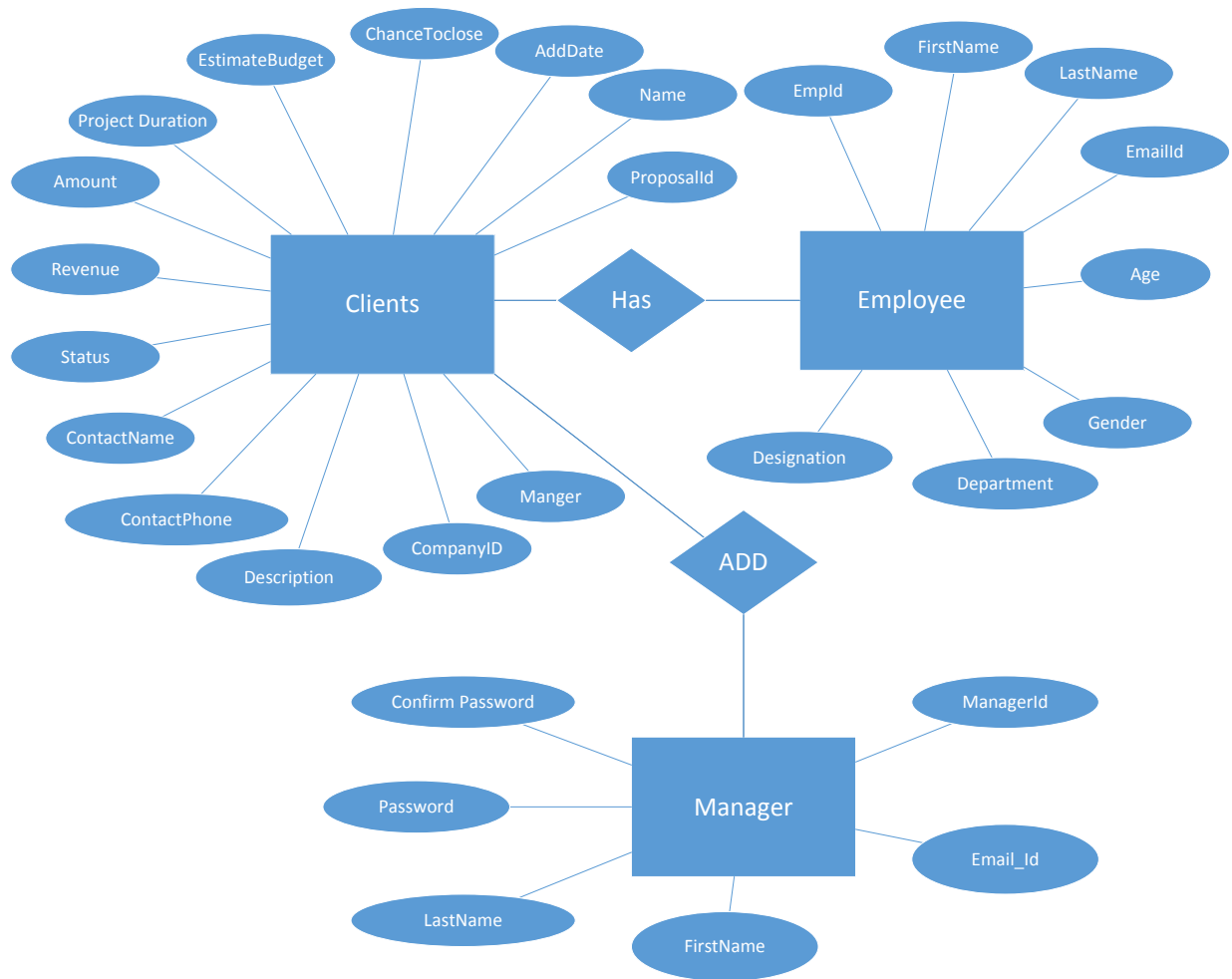
- Final seminar: 12/01/2016

Final execution and project release is scheduled on this day

4. Project Design Description:

The design of this project can be explained by using UML diagram, use case diagram, activity diagram, ER diagram.

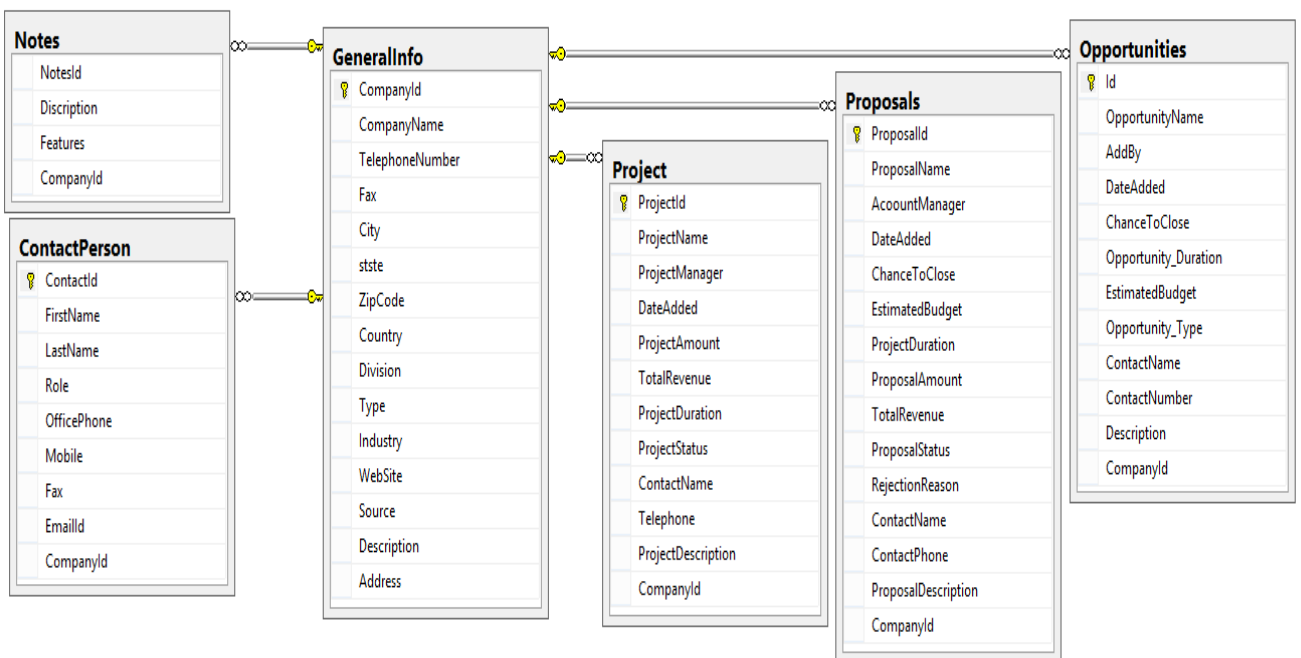
ER-Diagram:



Database Diagram:

Logindetails	
UserId	
Username	
Password	
MailId	
Usertype	

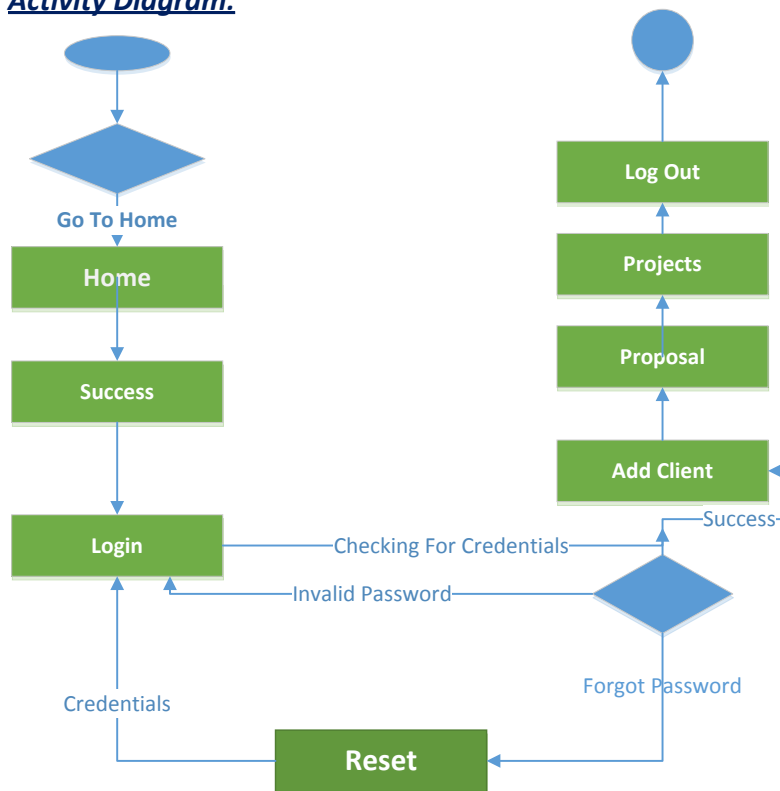
EmployeeDetails	
EmployeeId	
FirstName	
lastName	
Age	
Gender	
MailID	
Department	
Disignation	



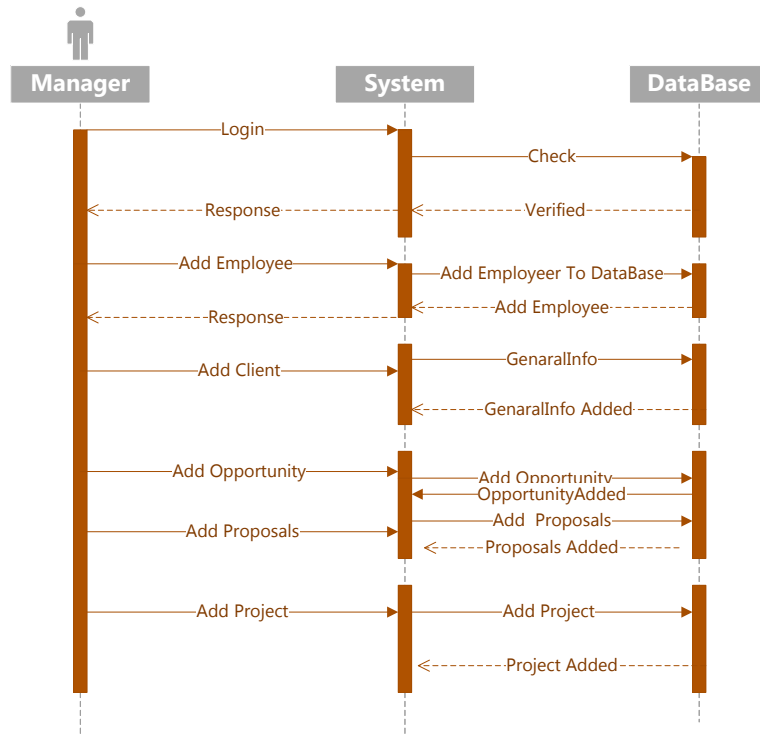
Use Case Diagram:



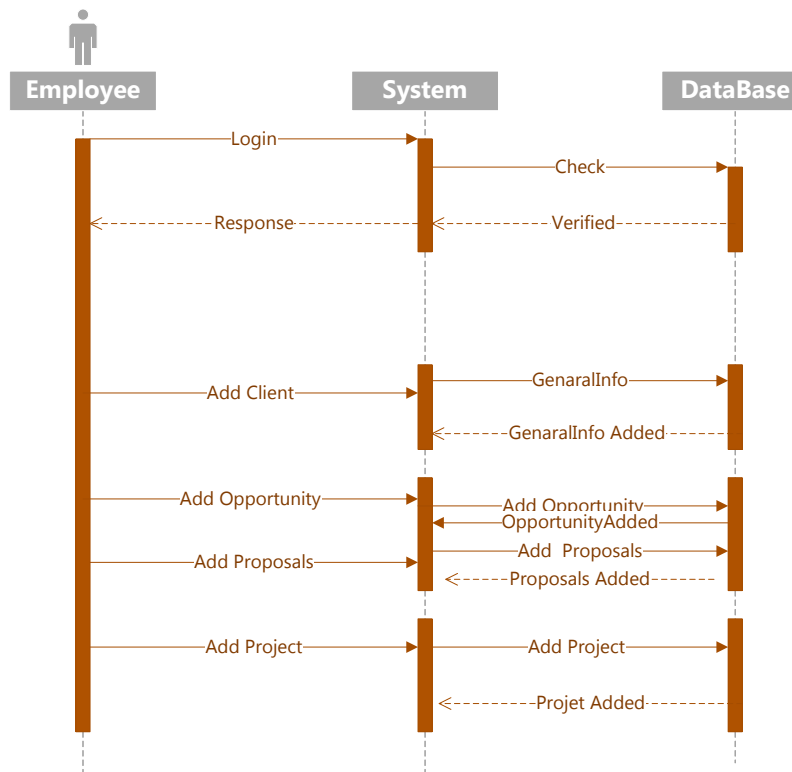
Activity Diagram:



Sequence Diagram For Manager:



Sequence Diagram For Employee:



5. Design unit's impacts:

If there is change in requirements in the later stages, any changes that are going to be made on this project doesn't affect the current architecture and functionality.

6. Functional Overview

6.1 Functional Area

There are very few functional areas handled by the project team associated with this project, they are:

- Budget
- Communication
- Risk
- Scope
- Quality
- Schedule

6.2 Requirements

Functional requirements may include:

- Management functions
- Access controls
- Client requirements
- Methods of authentication

7. OPEN ISSUES

- Any technical issue that can cause system to crash
- Software malfunctions and missing files
- Change in business requirements
- Management issues
- Employee issues

8. ACKNOWLEDGEMENTS

We would like to thank the Graduation committee for giving us this wonderful opportunity to do a real-time project, thus allowing us to learn about how things work in the real world. We would like to express our most significant appreciation to Prof. Do Young Park for his understanding and guiding us all through the semester. Additionally, it is our commitment to show gratitude towards all the professors, stud by us, suggesting and encouraging during this project.

9. REFERENCES

- <https://www.visualstudio.com/downloads/>
- <https://www.microsoft.com/en-us/download/developer-tools.aspx>
- <https://www.gliffy.com/uses/uml-software/>
- <https://www.tutorialspoint.com/csharp/>
- <http://www.w3schools.com/bootstrap/>

10. APPENDICES

- Appendix 1: Project Overview
- Appendix 2: Technical Description of Project
- Appendix 3: Functional Area.
- Appendix 4: Risk Assessment.
- Appendix 5: Project Flow
- Appendix 6: Design Impacts.